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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,413	08/05/2003	Kazuhiko Yoshida	JCLA11963	3836

7590 03/18/2004

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EXAMINER

BINDA, GREGORY JOHN

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 03/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/635,413

Applicant(s)

YOSHIDA ET AL.

Examiner

Greg Binda

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

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*Drawings*

1. Figures 5 & 6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).
2. The drawings are objected to because reference numeral 3 is used to identify a part in the drawings of the prior art (Figs. 5 & 6) and then reused to identify a modification of such part in the drawings of the disclosed invention (Figs. 1 & 2). See also MPEP § 608.02(e).
3. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

*Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by *SAE Manual*.  
Fig. 1 shows a constant velocity joint comprising an outer joint including all the limitations of the claim. In the second column on page 149, the *SAE Manual* discloses that the surfaces of the outer joint member are hardened. Therefore the surfaces of the bottom, base and track portions of

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the outer joint member would be hardened. Unhardened portions remain under the hardened surface.

6. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshida et al, US 5,803,993 (Yoshida). Fig. 2 shows a constant velocity joint comprising an outer joint including all the limitations of the claim. In col. 2, line 18, Yoshida discloses that the surfaces of the outer joint member are hardened. Therefore the surfaces of the bottom, base and track portions of the outer joint member would be hardened. Unhardened portions remain under the hardened surface.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Shimuzu et al, US 5,913,633 (Shimuzu). Figs. 1-4 show a constant velocity universal joint comprising an outer joint member including a bowl-shaped mouth portion 1 and a stem portion 5 with a serration 7 formed on an outer peripheral (see also col. 2, lines 39 & 40) thereof, the stem portion 5 extending from a bottom portion 10 of the mouth portion 1 in an axial direction, wherein an induction hardened area (see col. 2, lines 19-21) is formed in the bottom portion 10 of the mouth portion 1 of the outer joint member.

*Claim Rejections - 35 USC § 103*

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over *SAE Manual*. *SAE Manual* shows (see Fig. 1) a constant velocity joint having a shoulder portion having a diameter that is equal to or greater than the diameter of the serration portion. In the second column on page 149, the *SAE Manual* discloses that the surfaces of the outer joint member are hardened but does not disclose the depth of the hardening being set to 3mm or less. However, it would have been obvious to one of ordinary skill in the art to design the constant velocity joint so that the hardened portion is set to 3mm or less, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Yoshida and Shimuzu for the same reasons noted in item 9 above.

11. Claims 1-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Niebling et al, US 5,725,285 (Niebling) in view of *SAE Manual*.

a. Claims 1-6 & 8-13. Figs. 1 shows a wheel bearing comprising all the limitations of the claim except Niebling does not expressly disclose hardening the surfaces of the bottom, base and track portions of the outer joint member 1. In the second column on page 149, the *SAE Manual* discloses hardening the surfaces of an outer joint member in order to provide required wear characteristics and torsional strength. It would have been obvious to one of ordinary skill in the art to harden the surfaces of the outer joint member

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of Niebling in order to provide required wear characteristics and torsional strength as taught by *SAE Manual*.

b. Claims 7 & 14. In addition to that noted in subparagraph 'a' above, it would have been obvious to one of ordinary skill in the art to design the constant velocity joint of the wheel bearing so that the base hardened portion is set to 3mm or less, for the same reasons noted in item 9 above.

### *Conclusion*

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yoshida et al, US 6,319,337 discusses hardened layer depth in col. 4. Welschof, Ouchi and Sahashi each show a constant velocity joint.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Binda whose telephone number is (703) 305-2869. The examiner can normally be reached Monday through Thursday from 9:30 am to 7:00 pm. The examiner can also be reached on alternate Fridays. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne, can be reached on (703) 308-1159. The fax phone number is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168 and 308-1113.



Greg Binda  
Primary Examiner, Art Unit 3679